

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:
Andrew Michael Duggan et al.

Serial No.: 10/809.042

Confirmation No.: 5804

Filed: March 25, 2004

For: TUBING EXPANSION

Group Art Unit: 3725

Examiner: Debra M. Sullivan

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4).

Dated: October 18, 2010

Signature: /Jason C. Huang, Reg. No. 46,222/

Dear Sir:

APPEAL BRIEF

Applicants submit this Appeal Brief to the Board of Patent Appeals and Interferences on appeal from the decision of the Examiner of Group Art Unit 3725 dated December 18, 2009, finally rejecting claims 1-3, 6-19, 22, 23, 25, 29-35, 42-44, 49, 52, 53, 63-65, and 98-100. The final rejection of these claims is appealed.

Enclosed for filing in the above-referenced application are the required fees of \$540.00 associated with this brief, herewith paid for via credit card.

The Commissioner is hereby authorized to charge underpayments or credit overpayments to counsel's Deposit Account No. 20-0782/CRUI/0012.P1.

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Real Party in Interest

The present application has been assigned to Weatherford/Lamb, Inc., Houston, Texas.

Related Appeals and Interferences

Applicants assert that no other appeals or interferences are known to the Applicants or the Applicants' legal representative which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1-3, 6-35, 37-70, and 98-100 are pending in the application. Claim 4-5, 36, 71-97 have been canceled without prejudice. Claim 45 is allowed. Claims 20, 21, 24, 26-28, 37-41, 46-48, 50, 51, 54-62, and 66-70 have been withdrawn. Claims 1-3, 6-19, 22, 23, 25, 29-35, 42-44, 49, 52, 53, 63-65, and 98-100. stand finally rejected as discussed below. The final rejections of claims 1-3, 6-19, 22, 23, 25, 29-35, 42-44, 49, 52, 53, 63-65, and 98-100. are appealed. The pending claims are shown in the attached Claims Appendix.

Status of Amendments

All claim amendments have been entered by the Examiner. No amendments to the claims were proposed after the final rejection.

Summary of Claimed Subject Matter

Independent claim 1 is directed to a tubing expansion device 10 having at least one expansion member 14 adapted to expand a tubing 12 by inducing a hoop stress in the tubing; and at least one further expansion member 16 adapted to expand the tubing 12 by inducing a compressive yield of the tubing 12, wherein one of said at least one expansion member 14 and said at least one further expansion member 16 is adapted to expand the tubing 12 to a first diameter and the other of said at least one expansion member 14 and said at least one further expansion member 16 is adapted to further expand the tubing 12 to a larger second diameter, wherein the device 10 is arranged such that expansion of the tubing 12 to a desired final diameter is carried out using the hoop stress inducing expansion member 14.

Independent claim 100 is directed to a tubing expansion device 10 having at least one expansion member 14 adapted to expand a tubing 12 by inducing a hoop stress in the tubing 12, wherein the hoop stress inducing expansion member 14 comprises an expansion cone; and at least one further expansion member 16 adapted to expand the tubing 12 by inducing a compressive yield of the tubing 12, wherein one of said at least one expansion member 14 and said at least one further expansion member 16 is adapted to expand the tubing 12 to a first diameter and the other of said at least one expansion member 14 and said at least one further expansion member 16 is adapted to further expand the tubing 12 to a larger second diameter, wherein the device 10 is arranged such that expansion of the tubing 12 to a desired final diameter is carried out using the hoop stress inducing expansion member 14.

Grounds of Rejection to Be Reviewed on Appeal

1. Rejection of claims 1-3, 6-19, 22, 23, 25, 29-35, 42, 43, 49, 52, 53, 63-65, and 98-100 under 35 U.S.C. § 102(e) as being anticipated by Metcalf (U.S. Patent 6,543,552 B1).
2. Rejection of claim 44 under 35 U.S.C. § 103(a) as being unpatentable over the '552 patent in view of Lauritzen (U.S. 6,722,441 B2).

ARGUMENTS

1. The Examiner erred in rejecting claims 1-3, 6-19, 22, 23, 25, 29-35, 42, 43, 49, 52, 53, 63-65, and 98-100 under 35 U.S.C. § 102(e) as being anticipated by Metcalfe, U.S. Patent 6,543,552 B1 ("the '552 patent").

The Examiner states the '552 patent discloses an apparatus for lining a wellbore having an expansion device (20) having expansion members (38) adapted to expand a tubing by inducing a compressive yield and an expansion member, comprising of an expansion cone, adapted to expand a tubing by inducing a hoop stress in the tubing such that the compressive yield expansion members (38) expands a tubing (18) to a first diameter and the hoop stress expansion member expands the tubing to a second larger diameter. In the Advisory Action dated April 5, 2010, the Examiner explained:

"the figure of Metcalfe (reproduced in the final rejection mailed December 18, 2009) shows a hoop stress expansion member. The examiner has identified the hoop stress expansion member to be the portion of the expander located above the end of the rollers 38 (i.e. the straight portion of the expander above rollers 38). As clearly seen in the figure this portion of the expander contacts the inclined semi-expanded tubing and further expands the tubing to the final expanded diameter."

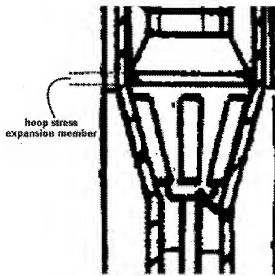


FIG A

(copied from the final rejection mailed December 18, 2009)

According to MPEP 2125, drawings and pictures can anticipate claims if they clearly show the structure which is claimed. *In re Mraz*, 455 F.2d 1069, 173 USPQ 25 (CCPA 1972). This requirement is not met by the figures of the '552 patent. The figures in the '552 Patent do not clearly show that the "hoop stress expansion member" identified by the Examiner expands the tubular by inducing a hoop stress.

Below are enlarged views of portions of Figures 1-3 of the '552 patent:

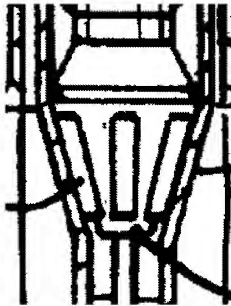


Fig. 1 (prior to expansion of the tubular)

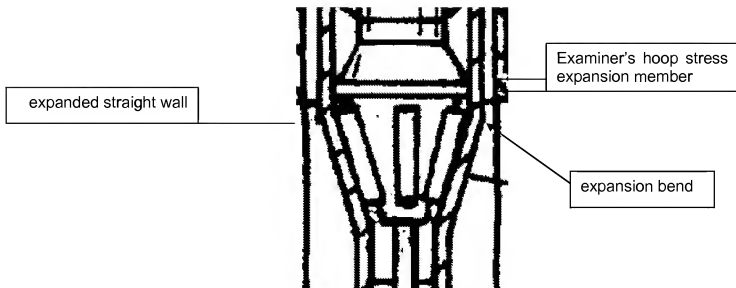


Fig. 2 (during expansion of the tubular)

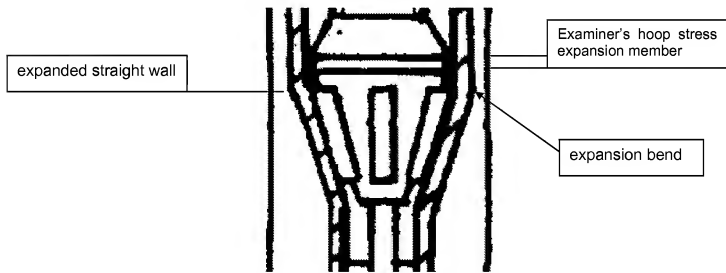


Fig. 3 (during expansion of the tubular)

In comparing FIG A to the Figures 1-3, it appears the Examiner's FIG A is Figure 1, and the Examiner has relied on Figure 1 to illustrate the hoop stress expansion member expanding the tubing to a second larger diameter. However, Applicants respectfully point out that Figure 1 illustrates the expansion device 20 prior to expansion of the tubing 18. (See the '552 patent, col. 5, ln. 23-25 and col. 4, lines 40-56). Because no expansion is being performed in Figure 1, the suggestion that the "hoop

stress expansion member" identified by the Examiner expands the tubular is not supported by the specification. Indeed, the specification discloses that expansion occurs in Figures 2 and 3, not Figure 1. Therefore, the feature identified by the Examiner in Figure 1 does not qualify as a "hoop stress expansion member."

Figures 2 and 3 also do not teach or suggest that feature expands the tubular. In Figures 2 and 3, the expansion device 20 has been activated and extended outwardly to expand the tubing 18. In this respect, it can be seen that the upper outer edges of the rollers 38 creates the "expansion bend" of the tubular 18. Figure 2 also shows the tubular 18 having an expanded straight wall section after the expansion bend. This straight wall section of the tubular 18 is present before and after the "hoop stress expansion member" feature identified by the Examiner. As such, the feature identified by the Examiner does not expand the tubular 18 and cannot qualify as a "hoop stress expansion member."

At best, the FIG A suggests that the "hoop stress expansion member" identified by the Examiner is in contact with the walls of the tubular 18. However, "contact" does not equate to "expansion." There is clearly no indication that contact between the "hoop stress expansion member" and the tubular 18 expands the tubular 18 or is even capable of expanding the tubular 18. In fact, the opposite is shown by the figures, as indicated by the straight wall section before and after the "hoop stress expansion member."

Moreover, expansion of the tubing using the "hoop stress expansion member" is not described anywhere in the specification of the '552 patent. The specification discloses at column 5, line 65 through column 6, line 1, that

the first expander section rollers 38 move in rolling contact around the inner wall of the tubing 18, and expand the tubing to an intermediate diameter 54.... The second expander section 32 produces a further expansion of the tubing 18.

The figures in the '552 patent are consistent with this description, in that the walls of the tubular 18 are straight between the expansion bend and the second expand section 32, including the section before and after the "hoop stress expansion member." Even Mr. Simpson, a co-inventor of the '552 patent, has stated in a previously filed declaration that the "hoop stress expansion member" identified in the FIG A does not

expand the tubing by inducing a hoop stress. Thus, the Examiner's position is neither supported by the figures, nor corroborated by the description.

Also, the '552 patent is silent as to the relative size of the "hoop stress expansion member" and there is simply no teaching that the "hoop stress expansion member" expands the tubular 18. Specifically, Figures 1-3 cannot be relied on to show the relative sizes of the elements as the specification is completely silent on the issue of expansion by the Examiner's "hoop stress expansion member." *Hockerson-Halberstadt, Inc. v. Avia Group Int'l, Inc.* 222 F.3d 951, 956 (Fed.Cir.2000) (drawings not expressly drawn to scale "may *not* be relied on to show particular sizes ... "); see also, *Franklin Elec. Co. v. Dover Corp.*, No. 2006-1442, 2007WL 634439, at 6 (Fed. Cir. Mar. 1, 2007)(unpublished)(noting that "[w]e need not resolve the ambiguity [of the apparent contact shown in the patent figures] here because figures are generally not intended to convey such detail"). As previously noted, what is taught is that the rollers 38 move in rolling contact around the inner wall of the tubing 18 and expand the tubing to an intermediate diameter, and the second expander section 32 further expands the tubular, as shown in Figures 2 and 3. Accordingly, Figures 1-3 and the corresponding description in the specification are inapposite as they do not illustrate or describe a "hoop stress expansion member" that expands the tubular 18.

Because the figures in the '552 patent do not reasonably disclose or suggest to one of ordinary skill in the art that the "hoop stress expansion member" identified by the Examiner expands the tubular, the '552 patent is precluded from anticipating claims 1 and 100. Therefore, Applicants respectfully request withdrawal of the § 102(b) rejection of claims 1 and 100 and allowance of the same. Additionally, Applicants believe the claims depending from claims 1 and 100 are allowable for at least the same reasons as claims 1 and 100.

Claim Rejections - 35 U.S.C. § 103

The Examiner rejected claim 44 under 35 U.S.C. § 103(a) as being unpatentable over the '552 patent in view of Lauritzen (U.S. 6,722,441 B2). Applicants respectfully traverse the rejection.

Claim 44 depends from claim 1. As set forth above, the '552 patent fails to teach all of the limitations of claim 1. Further, Lauritzen fails to cure the deficiencies of the '552 patent. As such, the combination of the '552 patent and Lauritzen fails to render claim 44 obvious. Therefore, Applicants respectfully request withdrawal of the rejection.

CONCLUSION

The Examiner erred in rejecting claims 1-3, 6-19, 22, 23, 25, 29-35, 42-44, 49, 52, 53, 63-65, and 98-100. The '552 patent failed to teach each and every limitation of the claims. Therefore, the Appellants respectfully request that the rejections be vacated in order for the application to proceed to allowance.

Respectfully submitted, and
S-signed pursuant to 37 C.F.R. 1.4,

/Jason C. Huang, Reg. No. 46,222/

Jason C. Huang
Registration No. 46,222
PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicants

CLAIMS APPENDIX

1. (Previously Presented) A tubing expansion device comprising:
at least one expansion member adapted to expand a tubing by inducing a hoop stress in the tubing; and
at least one further expansion member adapted to expand the tubing by inducing a compressive yield of the tubing, wherein one of said at least one expansion member and said at least one further expansion member is adapted to expand the tubing to a first diameter and the other of said at least one expansion member and said at least one further expansion member is adapted to further expand the tubing to a larger second diameter, wherein the device is arranged such that expansion of the tubing to a desired final diameter is carried out using the hoop stress inducing expansion member.
2. (Original) A tubing expansion device as claimed in claim 1, wherein the expansion device is adapted to be rotated and translated through tubing to be expanded.
3. (Original) A tubing expansion device as claimed in claim 1, wherein the expansion device is adapted to be advanced through tubing to be expanded without rotation.
- 4.-5. (Cancelled)
6. (Original) A tubing expansion device as claimed in claim 1, wherein the hoop stress and compressive yield inducing expansion members are axially spaced.
7. (Original) A tubing expansion device as claimed in claim 1, wherein the hoop stress and compressive yield inducing expansion members are circumferentially spaced.

8. (Original) A tubing expansion device as claimed in claim 1, wherein the hoop stress and compressive yield inducing expansion members are arranged according to at least one parameter of a tubing to be expanded.

9. (Original) A tubing expansion device as claimed in claim 8, wherein the parameter is selected from the group comprising: a pre-expansion diameter of the tubing; a pre-expansion wall thickness of the tubing; a desired post expansion diameter of the tubing; a desired post expansion wall thickness of the tubing; a pre-expansion strength of the tubing; Young's Modulus of the tubing material; anticipated work hardening of the tubing during expansion; a desired post-expansion strength of the tubing; and an axial length of the tubing post-expansion.

10. (Original) A tubing expansion device as claimed in claim 1, wherein the expansion members are provided spaced alternately in an axial direction.

11. (Original) A tubing expansion device as claimed in claim 1, wherein the expansion members are provided spaced alternately in a circumferential direction.

12. (Original) A tubing expansion device as claimed in claim 1, wherein said hoop stress and compressive yield inducing expansion members are provided on respective separate portions coupled together to form the expansion device.

13. (Original) A tubing expansion device as claimed in claim 12, wherein the expansion device further comprises a hoop stress inducing expansion tool and a compressive yield inducing expansion tool, each carrying said respective hoop stress and compressive yield inducing expansion members.

14. (Original) A tubing expansion device as claimed in claim 12, wherein the portions are coupled together and restrained against relative rotation.

15. (Original) A tubing expansion device as claimed in claim 12, wherein at least one of said portions is rotatable relative to at least one other portion.

16. (Original) A tubing expansion device as claimed in claim 1, wherein the hoop stress inducing expansion member is adapted to contact the tubing over a majority of a circumference of the tubing.

17. (Original) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is adapted to contact the tubing over part of a circumference of the tubing.

18. (Original) A tubing expansion device as claimed in claim 17, wherein the compressive yield inducing expansion member is adapted to contact the tubing in a point contact.

19. (Original) A tubing expansion device as claimed in claim 17, wherein the compressive yield inducing expansion member is adapted to contact the tubing in a line contact.

20. (Withdrawn) A tubing expansion device as claimed in claim 1, comprising a plurality of hoop stress inducing expansion members.

21. (Withdrawn) A tubing expansion device as claimed in claim 20, wherein said hoop stress inducing expansion members describe progressively increasing expansion diameters in a direction along an axial length of the device.

22. (Original) A tubing expansion device as claimed in claim 1, comprising a plurality of compressive yield inducing expansion members.

23. (Original) A tubing expansion device as claimed in claim 22, wherein said compressive yield inducing expansion members are arranged to describe progressively increasing expansion diameters in a direction along an axial length of the device.

24. (Withdrawn) A tubing expansion device as claimed in claim 1, comprising a plurality of hoop stress inducing expansion portions each having at least one hoop stress inducing expansion member.

25. (Original) A tubing expansion device as claimed in claim 1, comprising a plurality of compressive yield inducing expansion portions each having at least one compressive yield inducing expansion member.

26. (Withdrawn) A tubing expansion device as claimed in claim 1, comprising a plurality of hoop stress inducing expansion portions each having at least one hoop stress inducing expansion member, and a plurality of compressive yield inducing expansion portions each having at least one compressive yield inducing expansion member, said hoop stress and compressive yield inducing expansion portions axially alternating along a length of the device.

27. (Withdrawn) A tubing expansion device as claimed in claim 1, comprising a plurality of hoop stress inducing expansion portions each having at least one hoop stress inducing expansion member, and a plurality of compressive yield inducing expansion portions each having at least one compressive yield inducing expansion member, wherein a plurality of said hoop stress inducing expansion portions are coupled together and joined to at least one compressive yield inducing expansion portion.

28. (Withdrawn) A tubing expansion device as claimed in claim 1, comprising a plurality of hoop stress inducing expansion portions each having at least one hoop stress inducing expansion member, and a plurality of compressive yield inducing

expansion portions each having at least one compressive yield inducing expansion member, wherein a plurality of said compressive yield inducing expansion portions are coupled together and joined to at least one hoop stress inducing expansion portion.

29. (Original) A tubing expansion device as claimed in claim 1, comprising at least one hoop stress inducing expansion member and at least one compressive yield inducing expansion member provided on a single portion of the device.

30. (Original) A tubing expansion device as claimed in claim 1, wherein the hoop stress inducing expansion member comprises a fixed expansion member.

31. (Original) A tubing expansion device as claimed in claim 1, wherein the hoop stress inducing expansion member is fixed relative to a remainder of the device.

32. (Original) A tubing expansion device as claimed in claim 1, wherein the hoop stress inducing expansion member is formed integrally with a body of the expansion device.

33. (Original) A tubing expansion device as claimed in claim 1, wherein the hoop stress inducing expansion member is rotatable with respect to the tubing.

34. (Original) A tubing expansion device as claimed in claim 33, wherein the hoop stress inducing expansion member is rotatably mounted on a body of the device.

35. (Original) A tubing expansion device as claimed in claim 1, wherein the hoop stress inducing expansion member comprises a fixed diameter expansion member.

36. (Cancelled)

37. (Withdrawn) A tubing expansion device as claimed in claim 1, wherein the hoop stress inducing expansion member comprises a compliant expansion member, wherein the compliant expansion member is radially moveable inwardly in order to a position having a smaller diameter.

38. (Withdrawn) A tubing expansion device as claimed in claim 37, wherein the compliant expansion member comprises a compliant cone.

39. (Withdrawn) A tubing expansion device as claimed in claim 1, comprising a hoop stress inducing expansion tool including a plurality of hoop stress inducing expansion rollers mounted for rotation about an axis substantially perpendicular to an axis of the tool.

40. (Withdrawn) A tubing expansion device as claimed in claim 1, comprising a cone with a plurality of hoop stress inducing expansion rollers rotatably mounted on the cone.

41. (Withdrawn) A tubing expansion device as claimed in claim 1, wherein the hoop stress inducing expansion member takes the form of a collapsible expansion cone which is movable between a collapse position and an expansion position, in the expansion position, the cone adapted for expanding the tubing.

42. (Original) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member comprises a rotary expansion member, which is rotatable about an expansion member axis.

43. (Original) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is provided as part of a compressive yield inducing expansion member module releasably coupled to a body of the device as a unit.

44. (Original) A tubing expansion device as claimed in claim 43, wherein the compressive yield inducing expansion member is rotatably mounted on a spindle.

45. (Previously Presented) A tubing expansion device, comprising:
at least one expansion member adapted to expand a tubing by inducing a hoop stress in the tubing; and

at least one further expansion member adapted to expand the tubing by inducing a compressive yield of the tubing, wherein one of said at least one expansion member and said at least one further expansion member is adapted to expand the tubing to a first diameter and the other of said at least one expansion member and said at least one further expansion member is adapted to further expand the tubing to a larger second diameter, wherein the compressive yield inducing expansion member is provided as part of a compressive yield inducing expansion member module releasably coupled to a body of the device as a unit, wherein the compressive yield inducing expansion member is rotatably mounted on a spindle, wherein the spindle is cantilevered and extends from a body of the device.

46. (Withdrawn) A tubing expansion device as claimed in claim 44, wherein the spindle is pivotally coupled to the body.

47. (Withdrawn) A tubing expansion device as claimed in claim 44, wherein an axis of the spindle is disposed at an angle with respect to a main axis of the device.

48. (Withdrawn) A tubing expansion device as claimed in claim 1, comprising a bearing between the compressive yield inducing expansion member and a body of the device, and a sealed lubrication system for containing lubricant to facilitate rotation of the compressive yield inducing expansion member relative to the body.

49. (Original) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is radially moveably mounted with

respect to a body of the device, for movement towards an expansion configuration describing an expansion diameter for expanding tubing to a predetermined diameter.

50. (Withdrawn) A tubing expansion device as claimed in claim 49, wherein the compressive yield inducing expansion member is lockable in the extended configuration.

51. (Withdrawn) A tubing expansion device as claimed in claim 49, wherein the compressive yield inducing expansion member is biased radially inwardly.

52. (Original) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is moveable in response to applied fluid pressure.

53. (Original) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is moveable in response to an applied mechanical force.

54. (Withdrawn) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is radially moveable relative to a body of the device in response to both: a) an applied mechanical force; and b) an applied fluid pressure force.

55. (Withdrawn) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is pivotally mounted with respect to a body of the device for movement towards an extended configuration.

56. (Withdrawn) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is adapted to generate a drive force on the tubing for at least partly translating the device with respect to the tubing.

57. (Withdrawn) A tubing expansion device as claimed in claim 56, wherein the drive force is generated on rotation of the expansion device.

58. (Withdrawn) A tubing expansion device as claimed in claim 56, wherein the expansion device is adapted to be translated through the tubing by a combination of an external axial force and the generated drive force.

59. (Withdrawn) A tubing expansion device as claimed in claim 56, wherein the expansion device is adapted to be translated through the tubing without an externally applied axial force.

60. (Withdrawn) A tubing expansion device as claimed in claim 56, wherein an axis of the compressive yield expansion member is skewed with respect to a body of the device.

61. (Withdrawn) A tubing expansion device as claimed in claim 56, wherein the device comprises a plurality of compressive yield inducing expansion members, and wherein the members are circumferentially spaced and helically oriented with respect to a body of the device.

62. (Withdrawn) A tubing expansion device as claimed in claim 56, wherein the compressive yield inducing expansion member includes a gripping surface for gripping the tubing to impart a drive force on the tubing.

63. (Original) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is adapted to expand the tubing by less than 50% of the total expansion of the tubing.

64. (Original) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is adapted to expand the tubing by less than 25% of the total expansion of the tubing.

65. (Original) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member is adapted to expand the tubing by less than 10% of the total expansion of the tubing.

66. (Withdrawn) A tubing expansion device as claimed in claim 1, wherein at least one of the hoop stress inducing and compressive yield inducing expansion members has an expansion member axis, and wherein said axis is non-parallel with respect to a main axis of the device.

67. (Withdrawn) A tubing expansion device as claimed in claim 1, wherein the compressive yield inducing expansion member comprises a rotary expansion member, which is rotatable about an expansion member axis, and wherein said axis is non-parallel with respect to a main axis of the device.

68. (Withdrawn) A tubing expansion device as claimed in claim 67, wherein said expansion member axis converges with the tool main axis towards a leading end of the device.

69. (Withdrawn) A tubing expansion device as claimed in claim 67, wherein the compressive yield inducing expansion member is rotatably mounted on a spindle, and wherein the spindle is disposed non-parallel with respect to the device main axis.

70. (Withdrawn) A tubing expansion device as claimed in claim 67, wherein the compressive yield inducing expansion member includes a spindle which is rotatable relative to a body of the device, and wherein the spindle is disposed non-parallel with respect to the device main axis.

71-97. (Cancelled).

98. (Previously Presented) The tubing expansion device of claim 100, wherein the expansion cone engages an inner wall of the tubular around a majority of the inner diameter in order to expand the tubing.

99. (Previously Presented) The tubing expansion device of claim 1, wherein the at least one expansion member is adapted to expand the tubing by solely inducing a hoop stress in the tubing.

100. (Previously Presented) A tubing expansion device comprising:
at least one expansion member adapted to expand a tubing by inducing a hoop stress in the tubing, wherein the hoop stress inducing expansion member comprises an expansion cone; and

at least one further expansion member adapted to expand the tubing by inducing a compressive yield of the tubing, wherein one of said at least one expansion member and said at least one further expansion member is adapted to expand the tubing to a first diameter and the other of said at least one expansion member and said at least one further expansion member is adapted to further expand the tubing to a larger second diameter, wherein the device is arranged such that expansion of the tubing to a desired final diameter is carried out using the hoop stress inducing expansion member.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.